UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,890	10/01/2003	Michael R. Longe	TEGI0013	5341

22862 7590 12/06/2005

GLENN PATENT GROUP
3475 EDISON WAY, SUITE L
MENLO PARK, CA 94025

EXAMINER	
SHAPIRO, LEONID	
ART UNIT	**PAPER NUMBER**
2677	

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/677,890	LONGE ET AL.	
	Examiner	Art Unit	
	Leonid Shapiro	2677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-65* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-65* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 12-14, 15, 17, 27, 31 – 35, 37, 58, and 60, 63-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, Watanabe, USPN 6,567,072 in view of Goodman et al., USPN 6,654,733 B1 and Masui, USPN 6,002,390.

Claim 1

Watanabe describes a text entry input system [character input device 1] that comprises a directional selection means [direction indicating device 2] plus one or more buttons or equivalent user input means [keys 4 – 7] and an output device [display device 9] with a text display area [function display unit 10]. Watanabe, col. 7, lines 20 – 44; and figure 1. Watanabe teaches a collection of linguistic objects [character sets 11 – 17 etc.]. Watanabe, col. 8, lines 5 – 24; and figures 3 & 4. Note that the specification teaches that "The linguistic objects... include but are not limit to: words, phrases, abbreviations, chat slang, emoticons, user IDs, URLs, non-English (such as Chinese or Japanese) characters." Specification, page. 8. Watanabe teaches a processor [CPU 18]. Watanabe, col. 11, lines 25 – 36; and figure 11. Watanabe teaches that the processor comprises an object search engine, a distance value calculation module. The directional selection means is used to point in a direction of each of the letters. Watanabe, col. 9, lines 1 –

17. The processor calculates a distance to find letters in the pointing direction with the distance calculation module. Watanabe, col. 8, lines 24 – 35; and figures 5A – 5C.

Watanabe does not disclose processor to weight values for the letters with distance calculation module, said processor retrieving a predicted list of linguistic objects based on the letters and weight values with object search engine, processor evaluating and ordering said predicted list of linguistic objects with said linguistic object module, and said selection component being used to select a desired linguistic objects from said predicted list of linguistic objects.

Goodman et al. teaches processor (See Fig. 1, item 21) to weight values for the letters with distance calculation module, said processor retrieving a predicted list of linguistic objects based on the letters and weight values with object search engine, processor evaluating and ordering said predicted list of linguistic objects with said linguistic object module (See Fig. 3, item 204, Col. 9, Lines 21-62)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teaching of Goodman et al. into Watanabe system in order to determine a most likely intended-to-be-typed keystrokes (See Col. 1, Line 60-61 in the Goodman et al. reference).

Watanabe and Goodman et al. do not disclose selection component being used to select a desired linguistic objects from said predicted list of linguistic objects.

Masui teaches selection component being used to select a desired linguistic objects from said predicted list of linguistic objects (See Fig. 7, items PDMj, A, Col. 8, Lines 31-37).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teaching of Masui into Goodman et al. and Watanabe system in order to select candidate words (See Col. 1, Line 55-57 in the Masui reference).

Claims 12, 15, 58

Watanabe teaches that the directional select means is a joystick or omni-directional rocker switch. Watanabe, col. 7, lines 20 – 43; col. 15, line 4 – col. 16, line 15; and figures 1 & 19.

Claim 13

Watanabe does not specifically teach that the joystick has at least a 10° precision.

Watanabe does teach that the joystick [direction indicating device 2] has at least 12 directional stages. Watanabe, col. 11, lines 63 – 65; and figure 5A. With at least 12 directional stages, this provide a 30° precision [360°/12].

It would have been obvious to one of ordinary skill in the art at the time of the invention to increase the number of directional stages to 36 to provide a 10° precision and thus more possible letters with less steps.

Claim 14

Watanabe teaches at least four buttons [keys 4 – 7] independent of the directional selection means. Watanabe, col. 7, lines 20 – 44; and figure 1.

Claim 17

Watanabe teaches that the system provides visual feedback [highlighting] on each movement of the directional selection means. Watanabe, col. 14, lines 15 – 43; and figure 18.

Claim 27

Watanabe teaches means for precisely selecting [determination key 4] the letters of the linguistic object. Watanabe, col. 9, lines 18 – 47; col. 11, lines 25 – 50; and figures 8A, 8B, & 11.

Claim 31

Watanabe teaches a means to change the last entered letter. Watanabe, col. 14, lines 15 – 37; and figure 18.

Claim 32

Watanabe teaches a text input method using a directional input device [direction indicating device 2]. Watanabe, col. 7, lines 20 – 44; and figure 1. Each direction entered corresponds to one or more linguistic object subcomponents according to a predetermined mapping. Watanabe, col. 4, lines 13 – 33; and figure 4. Watanabe teaches preparing an output by applying the predetermined mapping to user-submitted directional input entries submitted nia the directional input device. Watanabe, col. 8, lines 26 – 41; col. 19, lines 9 – 17; col. 10, line 16 – col. 11 line 22; and figures 5A – 5C.

Watanabe does not disclose the output including candidate linguistic object subcomponent and associated probability weightiness; retrieving a list of predicted linguistic

objects from the dictionary based upon the output; facilitating user selection of a desired linguistic object from said list.

Goodman et al. teaches the output including candidate linguistic object subcomponent and associated probability weightiness; retrieving a list of predicted linguistic objects from the dictionary based upon the output (See Fig. 3, item 204, Col. 9, Lines 21-62)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teaching of Goodman et al. into Watanabe system in order to determine a most likely intended-to-be-typed keystrokes (See Col. 1, Line 60-61 in the Goodman et al. reference).

Watanabe and Goodman et al. do not disclose facilitating user selection of a desired linguistic object from said list.

Masui teaches selection component being used to select a desired linguistic objects from said predicted list of linguistic objects (See Fig. 7, items PDMj, A, Col. 8, Lines 31-37).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teaching of Masui into Goodman et al. and Watanabe system in order to select candidate words (See Col. 1, Line 55-57 in the Masui reference).

Claim 33

Watanabe teaches that the angular direction is derived from recording the X-Y offset of a directional input device and converting that offset into an angular notation comprising radians, gradients, or degrees. Watanabe, col. 10, line 16 – col. 11 line 22; and figures 10A – 10B.

Claim 34

Watanabe teaches that the conversion is a variation on the standard Cartesian to Polar formula of Angle = arctan (Y/X) [equation 8]. Watanabe, col. 10, line 16 – col. 11 line 22; and figures 10A – 10B.

Claim 35

Watanabe teaches that the letter retrieved can be one of any number of adjacent or nearby letters or symbols. Watanabe, col. 4, lines 13 – 33; and figure 4.

Claim 37

Watanabe teaches that the the linguistic objects comprise words and the linguistic object subcomponents comprise letters. Watanabe, col. 10, lines 9 – 15; and figures 8(c), 9(a), & 9(b).

Claim 60

Watanabe teaches a set of buttons [keys 4 – 7] that can be used with the directional input device [direction indicating device 2], separately or simultaneously, to switch or choose input modes, to change from input to word selection, or to invoke other functions. Watanabe, col. 7, lines 22 – 43; and figure 1.

Claim 63

Watanabe describes a text entry input module for use with user interface components [character input device 1] including a directional indicator [direction indicating device 2] plus

one or more buttons or equivalent user input means [keys 4 – 7] and an output device [display device 9] with a text display area [function display unit 10]. Watanabe, col. 7, lines 20 – 44; and figure 1. Watanabe teaches a database of linguistic objects; wherein a preestablished relationship exists between angular direction of the direction indicator and subcomponents of linguistic objects in the dictionary[character sets 11 – 17 etc.]. Watanabe, col. 8, lines 5 – 24; and figures 3 & 4. Note that the specification teaches that "The linguistic objects... include but are not limit to: words, phrases, abbreviations, chat slang, emoticons, user IDs, URLs, non-English (such as Chinese or Japanese) characters." Specification, page. 8. Watanabe teaches a processor [CPU 18]. Watanabe, col. 11, lines 25 – 36; and figure 11. Watanabe teaches that the processor comprises an object search engine configured to utilize the output to retrieve from the dictionary a list of predicted linguistic objects potentially representative of the user-submitted directions. Watanabe, col. 9, lines 1 – 17. The processor calculates a distance to find letters in the pointing direction with the distance calculation module. Watanabe, col. 8, lines 24 – 35; and figures 5A – 5C.

Watanabe does not disclose a calculation module to apply preestablished relationship to each user-submitted direction entered via the direction indicator to provide an output, said output including: multiple predicted linguistic object subcomponents and, for each predicted linguistic object subcomponent, an associated proximity weighting; a linguistic object module programmed to utilize at least one predetermined linguistic model to order said list of potential linguistic objects according to likelihood of intended selection by the user; a selection component to facilitate user selection of a desired linguistic object from said ordered list of predicted linguistic objects.

Goodman et al. teaches a calculation module (See Fig. 1, item 21) to apply preestablished relationship to each user-submitted direction entered via the direction indicator to provide an output, said output including: multiple predicted linguistic object subcomponents and, for each predicted linguistic object subcomponent, an associated proximity weighting; a linguistic object module programmed to utilize at least one predetermined linguistic model to order said list of potential linguistic objects according to likelihood of intended selection by the user (See Fig. 3, item 204, Col. 9, Lines 21-62)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teaching of Goodman et al. into Watanabe system in order to determine a most likely intended-to-be-typed keystrokes (See Col. 1, Line 60-61 in the Goodman et al. reference).

Watanabe and Goodman et al. do not disclose a selection component to facilitate user selection of a desired linguistic object from said ordered list of predicted linguistic objects.

Masui teaches a selection component to facilitate user selection of a desired linguistic object from said ordered list of predicted linguistic objects (See Fig. 7, items PDMj, A, Col. 8, Lines 31-37).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teaching of Masui into Goodman et al. and Watanabe system in order to select candidate words (See Col. 1, Line 55-57 in the Masui reference).

Claim 64

Watanabe describes a text entry input module for use with user interface components [character input device 1] including a directional indicator [direction indicating device 2] plus one or more buttons or equivalent user input means [keys 4 – 7] and an output device [display device 9] with a text display area [function display unit 10]. Watanabe, col. 7, lines 20 – 44; and figure 1. Watanabe teaches a vocabulary database of linguistic objects; a mapping between angular directions of the direction indicator and linguistic object subcomponents [character sets 11 – 17 etc.]. Watanabe, col. 8, lines 5 – 24; and figures 3 & 4. Note that the specification teaches that "The linguistic objects... include but are not limit to: words, phrases, abbreviations, chat slang, emoticons, user IDs, URLs, non-English (such as Chinese or Japanese) characters." Specification, page. 8. Watanabe teaches a processor [CPU 18]. Watanabe, col. 11, lines 25 – 36; and figure 11. Watanabe teaches that the processor comprises an object search engine configured to utilize the output to retrieve from the dictionary a list of predicted linguistic objects potentially representative of the user-submitted directions. Watanabe, col. 9, lines 1 – 17. The processor calculates a distance to find letters in the pointing direction with the distance calculation module. Watanabe, col. 8, lines 24 – 35; and figures 5A – 5C.

Watanabe does not disclose a calculation module to apply mapping to each user-submitted direction entered via the direction indicator to provide an output, said output including: multiple predicted linguistic object subcomponents and, for each predicted linguistic object subcomponent, an associated proximity weighting; a linguistic object module programmed to utilize at least one predetermined linguistic model to order said list of potential linguistic objects according to likelihood of intended selection by the user; a selection

component to facilitate user selection of a desired linguistic object from said ordered list of predicted linguistic objects.

Goodman et al. teaches a calculation module (See Fig. 1, item 21) to apply mapping to each user-submitted direction entered via the direction indicator to provide an output, said output including: multiple predicted linguistic object subcomponents and, for each predicted linguistic object subcomponent, an associated proximity weighting; a linguistic object module programmed to utilize at least one predetermined linguistic model to order said list of potential linguistic objects according to likelihood of intended selection by the user (See Fig. 3, item 204, Col. 9, Lines 21-62)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teaching of Goodman et al. into Watanabe system in order to determine a most likely intended-to-be-typed keystrokes (See Col. 1, Line 60-61 in the Goodman et al. reference).

Watanabe and Goodman et al. do not disclose a selection component to facilitate user selection of a desired linguistic object from said ordered list of predicted linguistic objects.

Masui teaches a selection component to facilitate user selection of a desired linguistic object from said ordered list of predicted linguistic objects (See Fig. 7, items PDMj, A, Col. 8, Lines 31-37).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teaching of Masui into Goodman et al. and Watanabe system in order to select candidate words (See Col. 1, Line 55-57 in the Masui reference).

Claim 65

Watanabe describes a text entry input module using directional input apparatus [direction indicating device 2] an output device [display device 9] with a text display area [function display unit 10]. Watanabe, col. 7, lines 20 – 44; and figure 1. Watanabe teaches each directional input corresponds to one or more sub-word components according to a predetermined mapping [character sets 11 – 17 etc.]. Watanabe, col. 8, lines 5 – 24; and figures 3 & 4. Note that the specification teaches that "The linguistic objects... include but are not limit to: words, phrases, abbreviations, chat slang, emoticons, user IDs, URLs, non-English (such as Chinese or Japanese) characters." Specification, page. 8.

Watanabe does not disclose receiving machine-readable signals representing user-submitted directional input entered via the directional input apparatus; calculating values for each directional input including one or more sub-word and associate: probability weightings; retrieving a list of predicted words based upon said calculated values; facilitating user selection of a desired word from said list.

Goodman et al. teaches receiving machine-readable signals representing user-submitted directional input entered via the directional input apparatus; calculating values for each directional input including one or more sub-word and associate: probability weightings; retrieving a list of predicted words based upon said calculated values (See Fig. 3, item 204, Col. 9, Lines 21-62)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teaching of Goodman et al. into Watanabe system in order to determine a most likely intended-to-be-typed keystrokes (See Col. 1, Line 60-61 in the Goodman et al. reference).

Watanabe and Goodman et al. do not disclose facilitating user selection of a desired word from said list.

Masui teaches disclose facilitating user selection of a desired word from said list (See Fig. 7, items PDMj, A, Col. 8, Lines 31-37).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teaching of Masui into Goodman et al. and Watanabe system in order to select candidate words (See Col. 1, Line 55-57 in the Masui reference).

2. Claims 2, 3, 6 – 9, 29, 30, 43 – 45, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Watanabe, Goodman et al. and Masui in view of Vayda et al., USPN 5,798,760.

Claim 2

Watanabe, Goodman et al. and Masui do not teach an on-screen keyboard representation of a ring of letters or the letters' sub-word equivalents in each writing system.

Vayda teaches an on-screen keyboard representation [select/execute menu 2002] of a ring of letters [command selectors 2008]. Vayda, col. 17, lines 15 – 40; and figure 20.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the on-screen keyboard as taught by Vayda with the text input method as taught by

Watanabe, Goodman et al. and Masui to simply "the interaction between the user and an application program." Watanabe, col. 2, lines 54 – 55. See also Watanabe, col. 1, line 46 – col. 2, line 53; and col. 3, lines 6 – 16.

Claim 3

Vayda teaches that the on-screen keyboard is in the shape of a circle. Vayda, col. 17, lines 15 – 40; and figure 20.

Claim 6

Vayda shows an alphabetical order. Vayda, figure 20. Watanabe teaches a QWERTY order. Watanabe, col. 10, lines 11 – 15.

Claim 7

Vayda shows that the letters start at the 12 o'clock position. Vayda, figure 20.

Claim 8

Vayda teaches that the display may be rotated. Vayda, col. 15, lines 26 – 34. Thus it is inherent that the letters may have a moving starting position.

Claim 9

Vayda shows that the letters have a clockwise layout. Vayda, figure 20. Watanabe also teaches that the letters may be mapped clockwise. Watanabe, col. 9, lines 9 – 15.

Claim 29 & 30

Watanabe teaches that the last entered letter is indicated in the onscreen keyboard. Watanabe, col. 11, lines 39 – 50.

Claim 43

Watanabe does not teach that the directional input means is associated with an on-screen keyboard.

Vayda teaches directional input means [user input device 106] that is associated with an on-screen keyboard [command selectors 2008]. Vayda, col. 17, lines 15 – 40; and figure 20.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the on-screen keyboard as taught by Vayda with the text input method as taught by Watanabe to simply "the interaction between the user and an application program." Watanabe, col. 2, lines 54 – 55. See also Watanabe, col. 1, line 46 – col. 2, line 53; and col. 3, lines 6 – 16.

Claim 44

Vayda teaches that the on-screen keyboard comprises a ring of letters, numbers or other symbols. Vayda, col. 17, lines 15 – 40; and figure 20.

Claim 45

Watanabe teaches that the data may be represented in Polar or Cartesian coordinate system for calculation. Watanabe, col. 10, line 16 – col. 11 line 22; and figures 10A – 10B. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the on-screen keyboard shown in Polar or Cartesian coordinate system.

Claim 57

Vayda teaches that the directional input device [user input device 106] may be a set of buttons [such as keyboard]. Vayda, col. 4, lines 45 – 51; and col. 17, lines 30 – 32.

4. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Watanabe, Goodman et al. and Masui in view of Yamashiki, JP 57010832 A.

Claim 4

Watanabe, Goodman et al. and Masui do not specifically teach a set of compass point letters, the compass point letters being placed at positions around in a linguistic object selection list, in a separate on-screen compass area, or around the directional selection means.

Yamashiki teaches that a set of compass point letters [key characters 5] are placed around the directional selection means [input means 3].

Claim 11

Watanabe, Goodman et al. and Masui do not specifically teach that a number of characters are printed around the directional input means.

Yamashiki teaches that a number of characters [5] are printed around the directional input means [input means 3].

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the printed characters as taught by Yamashiki with the text entry system as taught by Watanabe, Goodman et al. and Masui to provide a visual indication of what character is chosen by the directional input means.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, Goodman et al. and Masui in view of Vayda et al. as applied to claim 2 above, and further in view of Easty et al., USPN 6,448,987 B1.

Claim 5

Neither Watanabe, Goodman et al. and Masui nor Vayda specifically teach that the letters have bottoms towards the center of the ring.

Easty teaches a that the letters [icons 11a & 12a] have bottoms towards the center of the ring [outer menu ring 11 and inner menu ring 12]. Easty, col. 4, lines 29 – 51; and figures 1a – 1c.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine direction of the icons in Easty with the text entry input system as taught by Watanabe, Goodman et al., Masui and Vayda so that the "categories of contents be presented in a balanced fashion, so that each category is presented with equal prominence" and that "the user interface be easy to navigate as well as visually compelling." Easty, col. 2, lines 51 – 55.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, Goodman et al. and Masui in view of Vayda et al. as applied to claim 2 above, and further in view of Comerford et al., UPSN 5,963,671.

Claim 10

Neither Watanabe, Goodman et al. and Masui nor Vayda teaches that each of the letters occupies different amount of radians depending upon use frequency.

Comerford teaches a keyboard where each of the letters occupies different amounts of space depending on use frequency. Comerford, col. 1, line 66 – col. 2, line 36.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of increasing the size of the more frequently used letters with the text entry input system as taught by Watanabe, Goodman et al. and Masui and Vayda to "attract the user and to facilitate quick recognition and selection." Comerford, col. 2, lines 5 – 6. "However, regardless of the layout, an attractant, such as color, intensity, or size, is used to make it easier for a soft keyboard user to find the location of the subset of characters that the user is most likely to select." Comerford, col. 2, lines 11 – 14. One in the art could easily change the size of the more frequently used letters by increasing the radians occupied by the letter depending on use frequency.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, Goodman et al. and Masui in view of Cecchi, USPN 4,439,649

Claim 16

Watanabe, Goodman et al. and Masui do not teach that the joystick or omni-directional rocker switch is a component of a multi-function video game controller.

Cecchi teaches that a joystick or omni-directional rocker switch is a component of a multi-function video game controller.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the video game controller as taught by Cecchi with the text entry input system as taught by Watanabe, Goodman et al. and Masui because that is what joystick are used for and it is fun.

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, Goodman et al. and Masui in view of Vayda et al. as applied to claim 2 above, and further in view of Selker, USPN 6,549,219 B2.

Claim 18

Neither Watanabe, Goodman et al. and Masui nor Vayda teaches that the visual feedback is a solid or gradient-fill pie wedge shape appearing on the on-screen keyboard, the pie wedge shape being centered on a current selected direction.

Selker teaches a solid or gradient-fill pie wedge shape appearing on the on-screen as a graphical user interface. The pie wedge is centered on the current selected direction. Selker, col. 2, lines 45 – 50.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the pie wedge shape graphical user interface as taught by Selker with the text entry

system as taught by Watanabe, Goodman et al. and Masui and Vayda to increase quick object selections. Selker, col. 1, lines 44 – 48.

9. Claims 19 - 23, 40, 41, and 46 – 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Watanabe, Goodman et al. and Masui in view of Vargas, USPN 5,748,512.

Claims 19, 21, 23, 40, 52, 53

Watanabe, Goodman et al. and Masui do not specifically teach a linguistic model.

Vargas teaches that the order of the list of predicted linguistic objects is based on a combination value of a calculated weighted distance value and a linguistic model. Vargas, col. 1, lines 5 – 12; col. 1, lines 56 – 60; and col. 5, line 55 – col. 6, line 7.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the predicted linguistic objects as taught by Vargas with the text input method taught by Watanabe, Goodman et al. and Masui so that a likely correct entry is entered "even when the user touches a key off center." Vargas, col. 1, lines 54 – 55. See also Vargas, col. 1, lines 43 – 46. Specifically, one in the art could easily use apply the prediction model of Vargas with the input method of Watanabe by replacing the keyboard of Vargas with the entry system of Watanabe. See Watanabe, col. 3, lines 51 – 54.

Claims 20, 22, 41, 47

Vargas teaches that the linguistic model comprises one or more of frequency of occurrence of a linguistic object in formal or conversational written text, frequency of occurrence of a linguistic object when following a preceding linguistic object or linguistic objects, proper or common grammar of the surrounding sentence, application context of current linguistic object entry, or recency of use or repeated use of the linguistic object by the user or within an application program. Vargas, col. 14, lines 18 – 40.

Claim 46, 48 - 51

Vargas teaches that the list of predicted linguistic objects is retrieved from a vocabulary database, and wherein a plurality of linguistic objects stored in the vocabulary database is ordered according to a linguistic model. Vargas, col. 7, line 54 – col. 8, line 2.

10. Claims 24 - 26, 28, 36, 54 – 56, 59, 61, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Watanabe, Goodman et al. and Masui in view of King et al., USPN 5,953,541.

Claims 24 - 26

Watanabe, Goodman et al. and Masui do not specifically teach that the linguistic objects longer than the number of actions of direction selection means are included in the list of predicted linguistic objects.

King teaches that the linguistic objects longer than the number of actions of direction selection means [stems 81, 82, and 84] are included in the list of predicted linguistic objects. King, col. 4, line 32 – 47; col. 11, line 40 – col. 12, line 4; and figure 1A.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the stems as taught by King with the text entry system as taught by Watanabe, Goodman et al. and Masui to "a disambiguating system that minimizes the ambiguity of entered keystrokes, and also maximizes the efficiency with which the user can resolve any ambiguity which does arise during text entry." King, col. 3, lines 5 – 8.

Claim 28

King teaches that an exact spelling sequence is displayed in the text display area. King, col. 10, lines 5 – 33..

Claim 36

King teaches that the possible matching letters are presented in order of predicted likelihood of desired match. King, col. 5, line 66 – col. 6, line 7.

Claims 54 - 56

King teaches that the user selects a partial linguistic object and continues with more directional inputs. King, col. 4, line 32 – 47; col. 11, line 40 – col. 12, line 4.

Claim 59

King teaches that the on-screen keyboard further comprises a smart punctuation symbol, the smart punctuation symbol when retrieved is automatically interpreted as a punctuation

symbol, diacritic mark or tonal indication at the place in the input sequence where a matching punctuation symbol, diacritic mark or tonal indication occurs in predicted linguistic objects. King, col. 22, line 64 – col. 23, line 24. See also Watanabe, col. 9, lines 49 – 67.

Claim 61

King teaches invoking an undo means after selecting a linguistic object from the list of predicted linguistic objects and displaying the previous retrieved linguistic object subcomponents and showing previously retrieved list of predicted linguistic objects. King, col. 3, lines 41 – 45.

Claim 62

King teaches selecting a linguistic object from a text message and displaying subcomponents letters of the linguistic object as if the subcomponents had been entered exactly s and showing a retrieved list of predicted linguistic objects corresponding to the subcomponents. King, col. 10, lines 5 – 33.

Response to Arguments

12. Applicant's arguments with respect to claims 1-62 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on 571-272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LS
12.05.05

AMR A. AWAD
PRIMARY EXAMINER